

Notice of Allowability

Application No.

10/760,519

Examiner

D. I. Lee

Applicant(s)

HOSOI, TORU

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/17/05.
2. ☒ The allowed claim(s) is/are 31-40.
3. ☒ The drawings filed on 17 February 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/121,678.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. Receipt is acknowledged of the Amendment under 37 C.F.R. §1.111 filed 17 February 2005.

Claims 31-40 are remain pending in the application.

Drawings

2. The corrected drawings (i.e., Figures 33-40 with a legend such as --Prior Art-- because only that which is old is illustrated) were received on 17 February 2005. These drawings are acceptable.

Allowable Subject Matter

3. Claims 31-40 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The Prior Art Admitted by the Applicant [PAAA] discloses an array waveguide grating having a predetermined substrate, a first channel waveguide (input channel waveguide) and a second channel waveguide (an output channel waveguide) for light waves λ_1 to λ_n transfer on the substrate, a channel waveguide array having a plurality of component waveguides having lengths progressively increasing with a predetermined difference between adjacent ones of the waveguides on the substrate, a first slab waveguide for connecting the ends of the first channel waveguides and one end of the channel waveguide array via a waveguide part (1st boundary part having a plurality of optical waveguides) having a rectangular, a parabolic, or a second degree function shape with a predetermined width and a length on the substrate, a second slab waveguide for connecting one end of the second channel waveguides and the other end of the channel waveguide array via a waveguide part (2nd boundary part) having a second shape that is identical shape as the first shape on the substrate.

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Uetsuka teaches a waveguide of the waveguide element for bandwidth adjustment provided on an input side of the input slab wavelength such that the shape part yield a taper-shape, a parabolic hone-shape.

One of ordinary skill in the art would not have been motivated to modify the teachings of PAAA and Uetsuka alone or in combination with other references in order to provide the claimed shape of array waveguide grating that includes first and second channel waveguides for light wave transfer on a substrate where at least a portion of at least one of the first and second shape includes a flaring in an exponential function shape toward the channel waveguide array represented by a function of a degree higher than the second degree toward the channel waveguide array and the open part of the first and second channel waveguides on the side of the first and second slab waveguide having a greater opening width than the waveguide width and shape directed from the stem part of the open part toward the open end is found on the inner side of rectangular shape of the opening width and on the outer side of a second degree curve connecting the stem part and the open end, as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D. I. Lee
Primary Examiner
Art Unit 2876

D. L.